

### R E M A R K S

Careful review and examination of the subject application are noted and appreciated.

### SUPPORT FOR THE CLAIM AMENDMENTS

Support for the claim amendments may be found in the specification, for example, on page 11 lines 2-8 and FIG. 2 as originally filed. Thus, no new matter has been added.

### IN THE DRAWINGS

The objection to the drawings has been obviated by a replacement set of formal drawings enclosed herein. As such, the objection should be withdrawn.

### CLAIM REJECTIONS UNDER 35 U.S.C. §102

The rejection of claims 1-7, 11-16 and 20 under 35 U.S.C. §102(b) as being anticipated by Thaller et al. '382 (hereafter Thaller) has been obviated in part by appropriate amendment and is respectfully traversed in part and should be withdrawn.

Thaller concerns an intelligent snoopy bus arbiter (Title). In contrast, claim 1 provides (in part) at least one master configured to present at least one transfer signal. In contrast, Thaller appears to be silent regarding either CPU modules 14 or 16 (asserted similar to the claimed at least one master)

being configured to present at least one transfer signal. Therefore, Thaller does not appear to disclose or suggest at least one master configured to present at least one transfer signal as presently claimed. Furthermore, the Office Action appears to be silent regarding the claimed "present at least one transfer signal" language. Therefore, *prima facie* anticipation has not been established.

Claim 1 further provides a first circuit configured to present a first transfer signal of at least one transfer signal received from a first master to a bus in response to granting a bus mastership to the first master, wherein the first transfer signal is different than an idle transfer signal. In contrast, Thaller appears to be silent regarding a circuit presenting a non-idle transfer signal received from either CPU modules 14 or 16 to a system bus 28 (asserted similar to the claimed bus).

Furthermore, the assertion on page 2 of the Office Action that Thaller discloses presenting a first transfer signal to a bus in column 54, lines 48-56 does not appear to address the claim language. The claim speaks of presenting **a transfer signal** to a bus. In contrast, the text of Thaller cited in the Office Action discusses inserting **an idle bus cycle** on the system bus 28. Column 16, lines 25-26 of Thaller define an idle bus cycle as a period "where no bus traffic is permitted". Thaller does not appear to

discuss the presence of an idle type transfer signal on the system bus 28 during an idle bus cycle.

Assuming, *arguendo*, that Thaller does somehow suggest presenting an idle type of transfer signal on a bus in response to granting a bus mastership (for which Applicants' representative does not necessarily agree), the idle type of transfer signal does not appear to anticipate the claimed first transfer signal which "is different than an idle transfer signal." Therefore, Thaller does not appear to disclose or suggest a first circuit configured to present a first transfer signal of at least one transfer signal received from a first master to a bus in response to granting a bus mastership to the first master, wherein the first transfer signal is different than an idle transfer signal as presently claimed. Claims 11 and 20 provide language similar to claim 1. As such, the claimed invention is fully patentable over the cited reference and the rejection should be withdrawn.

Claim 2 provides a first circuit configured to detect when zero masters of at least one master are able to use a bus. In contrast, Thaller appears to be silent regarding monitoring potential bus masters to detect that none is able to use the bus. Furthermore, the reference on page 3 of the Office Action to column 63, lines 12-14 and 18-19 of Thaller does not appear to discuss detecting when no master is **able** to use the bus. In particular, the cited text of Thaller appears to discuss monitoring the system

bus 28 for a **preselected pattern** of transaction activity. The transaction activity suggests that at least one of the masters (i) is able to use the bus and (ii) is actively using the bus when the preselected pattern is detected. Therefore, Thaller does not appear to disclose or suggest a first circuit configured to detect when zero masters or at least one master are able to use a bus as presently claimed. Claim 12 provides language similar to claim 2. As such, claim 2 and 12 are fully patentable over the cited reference and the rejection should be withdrawn.

Claim 4 provides detecting when a first master has locked a bus mastership. Despite the assertion on page 3 of the Office Action, the text in column 48, lines 7-24 (and the rest) of Thaller does not appear to discuss locking a bus mastership. Therefore, Thaller does not appear to disclose or suggest detecting when a first master has locked a bus mastership as presently claimed. Claim 14 provides language similar to claim 4. As such, the Examiner is respectfully requested to either (i) provide clear and precise evidence where Thaller allegedly anticipates locking a bus mastership or (ii) withdraw the rejection.

Claim 5 provides detecting when a first master is involved in a split response and no other masters or at least one master is requesting a bus mastership. In contrast, Thaller appears to be silent regarding a situation where (i) a particular master is involved in a split response and (ii) all other masters

are not requesting bus mastership. Therefore, Thaller does not appear to disclose or suggest detecting when a first master is involved in a split response and no other masters of at least one master is requesting a bus mastership as presently claimed. Claim 15 provides language similar to claim 5. As such, the Examiner is respectfully requested to (i) provide clear and precise evidence how Thaller allegedly anticipates the claim language or (ii) withdraw the rejection.

#### CLAIM REJECTIONS UNDER 35 U.S.C. §103

The rejection of claims 8-10 and 17-19 under 35 U.S.C. §103(a) as being unpatentable over Thaller in view of Jaramillo '937 is respectfully traversed and should be withdrawn.

The rejection of claims 1-20 under 35 U.S.C. §103(a) as being unpatentable over the AMBA Specification (hereafter AMBA) in view of Jaramillo is respectfully traversed and should be withdrawn.

Thaller concerns an intelligent snoopy bus arbiter (Title). Jaramillo concerns a system for optimizing bus arbitration latency and method therefore (Title). The AMBA specification concerns an advanced microcontroller bus architecture. In contrast, claim 1 provides (in part) a first circuit configured to present a first transfer signal of at least one transfer signal received from a first master (of at least one

master) to a bus in response to granting bus mastership to the first master. Despite the assertion on page 4 of the Office Action, AMBA appears to be silent regarding an AHB Arbiter presenting a first transfer signal received from a first master to a bus. In particular, the AHB Arbiter interface diagram in Figure 3-31 does not show a transfer type signal (i.e., HTRANS) as an output signal to a bus. Therefore, AMBA and Jaramillo, alone or in combination, do not appear to teach or suggest a first circuit configured to present a first transfer signal of at least one transfer signal received from a first master to a bus in response to granting bus mastership to the first master as presently claimed.

Claim 1 further provides a first circuit configured to present an idle transfer signal to a bus in response to removing bus mastership from all masters. Despite the assertion on page 5 of the Office Action, AMBA appears to be silent regarding the AHB Arbiter presenting an idle transfer signal (i.e., HTRANS=00) to a bus. Assuming, *arguendo*, that AMBA somehow does teach the AHB Arbiter presenting an idle transfer signal to a bus (for which Applicants' representative does not necessarily agree), the Office Action admits on page 5 that AMBA does not explicitly disclose removing bus mastership from the bus. As such, the AHB Arbiter does not appear to be capable of generating a signal in response to a nonexistent capability to remove bus mastership from a bus.

Furthermore, no clear and particular evidence is presented in the Office Action why adding the bus grant deassertion capability of Jaramillo to AMBA would obviously modify the AHB Arbiter capabilities to generate a signal in response to the bus grant deassertion. Therefore, AMBA and Jaramillo, alone or in combination, do not appear to teach or suggest a first circuit configured to present an idle transfer signal to a bus in response to removing bus mastership from all masters as presently claimed. Claims 11 and 20 provide language similar to claim 1. As such, the claimed invention is fully patentable over the cited reference and the rejection should be withdrawn.

The Examiner is respectfully requested to refrain from omnibus rejections asserting that the claimed elements are disclosed somewhere in a large block of text (see MPEP 707.07(d)). If the present grounds of rejection are maintained, the Examiner is respectfully requested to provide clear and precise references to pages, columns and line numbers of the references being relied upon.

Claim 8 provides a second circuit configured to multiplex a plurality of at least one transfer signals received from a plurality of masters responsive to a master signal (presented by an arbiter) to present a first transfer signal to a bus. In contrast, the Office Action admits (i) on page 4 that Thaller does not discuss a multiplexer and (ii) on page 5 that AMBA does not discuss

a multiplexer. Furthermore, despite the assertions on pages 4 and 5 of the Office Action, Jaramillo appears to be silent regarding a multiplexer 20 (asserted similar to the claimed second circuit) multiplexing **transfer signals** to present a first transfer signal to a bus. Instead, the multiplexer 20 of Jaramillo appears to multiplex **bus grant signals** back to the requesting masters. Furthermore, control of the multiplexer 20 of Jaramillo does not appear to come from an arbiter (arbiter logic 356 in Thaller or bus grant decision logic 18 in Jaramillo). Therefore, Thaller, Jaramillo and AMBA, alone or in combination, do not appear to teach or suggest second circuit configured to multiplex a plurality of at least one transfer signals received from a plurality of masters responsive to a master signal to present a first transfer signal to a bus as presently claimed. Claim 17 provides language similar to claim 8. As such, claim 8 and 17 are fully patentable over the cited references and the rejection should be withdrawn.

Claim 9 provides a second circuit configured to present one of a first transfer signal and an idle transfer signal to a bus in response to a control signal (presented by an arbiter). In contrast, Jaramillo appears to be silent regarding the multiplexer 20 presenting either (i) transfer signals or (ii) an idle transfer signal to a bus. Therefore, Thaller, Jaramillo and AMBA, alone or in combination, do not appear to teach or suggest second circuit configured to present one of a first transfer signal and an idle



transfer signal to a bus in response to a control signal as presently claimed. Claim 18 provides language similar to claim 9. The Examiner is respectfully requested to either (i) quote the language in the abstract of Jaramillo that allegedly discusses presenting idle transfer signals to a bus or (ii) withdraw the rejection.

#### COMPLETENESS OF THE OFFICE ACTION

Aside from a notice of allowance, Applicant's representative respectfully requests any further action on the merits be presented as a non-final action. 37 CFR §1.104(b) states:

(b) *Completeness of examiner's action.* The examiner's **action will be complete as to all matters**, except that in appropriate circumstances, such as misjoinder of invention, fundamental defects in the application, and the like, the action of the examiner may be limited to such matters of form need not be raised by the examiner until a claim is found allowable. (Emphasis added)

The Office Action rejects all of the claims under 35 U.S.C. §103(a) as being unpatentable over the AMBA specification but fails to provide clear and specific evidence in support of the rejections. Instead, the Office Action merely cites 132 pages of text (chapters 3 and 4) as teaching the claim limitations. As such, the Office Action mailed February 25, 2004 is not complete.

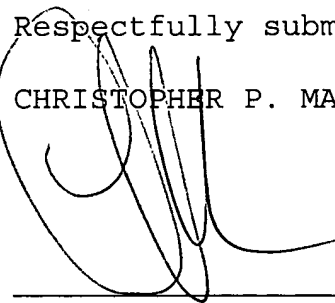
Accordingly, the present application is in condition for allowance. Early and favorable action by the Examiner is respectfully solicited.

The Examiner is respectfully invited to call the Applicants' representative at 586-498-0670 should it be deemed beneficial to further advance prosecution of the application.

If any additional fees are due, please charge Deposit Account No. 12-2252.

Respectfully submitted,

CHRISTOPHER P. MAIORANA, P.C.

A handwritten signature in black ink, appearing to read 'C. P. Maiorana', is written over a horizontal line.

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